AUXILIARY O_2 FLOWMETER INSTALLATION

INSTALLATION PROCEDURE

1. Turn the System Power switch to STANDBY and remove AC power from the machine.

2. Disconnect all pipeline hoses and close all cylinder valves.

3. Press the O_2 FLUSH button to relieve pressure from the system.

4. Remove the flowmeter housing back cover.

5. For machines with a ⅛ in. NPT plug in the main switch valve assembly (see Figure 1), remove the plug and proceed to Step 7. For earlier machines having an ell fitting at the back of the clippard valve, proceed to Step 6. For machines with a later style alarm channel, refer to Step 6A.

6. Carefully cut a one inch section of ¼ in. tube from the O_2 line at the back of the valve assembly and install a tee fitting as shown in Figure 1.

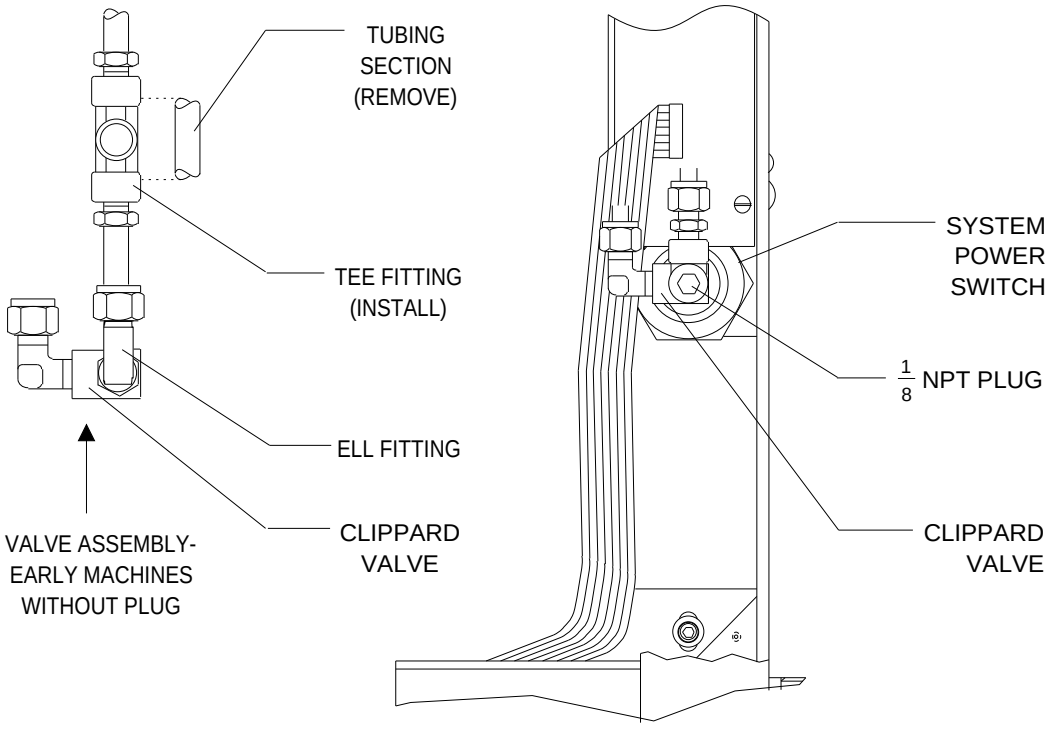


Figure 1: REAR VIEW OF SYSTEM POWER SWITCH VALVE ASSEMBLY

INSTALLATION PROCEDURE (continued)

6A. For machines with a later style alarm channel assembly that includes the O_2 supply pressure alarm switch (see Figure 1A), locate the hose barb cap on the first tee fitting behind the Clippard valve.

7A. Cut the tie strap securing the hose barb cap, and remove the cap from the hose barb.

8A. Open the O_2 cylinder valve momentarily to clear any debris from the back of the clippard valve.

Proceed to Step 9.

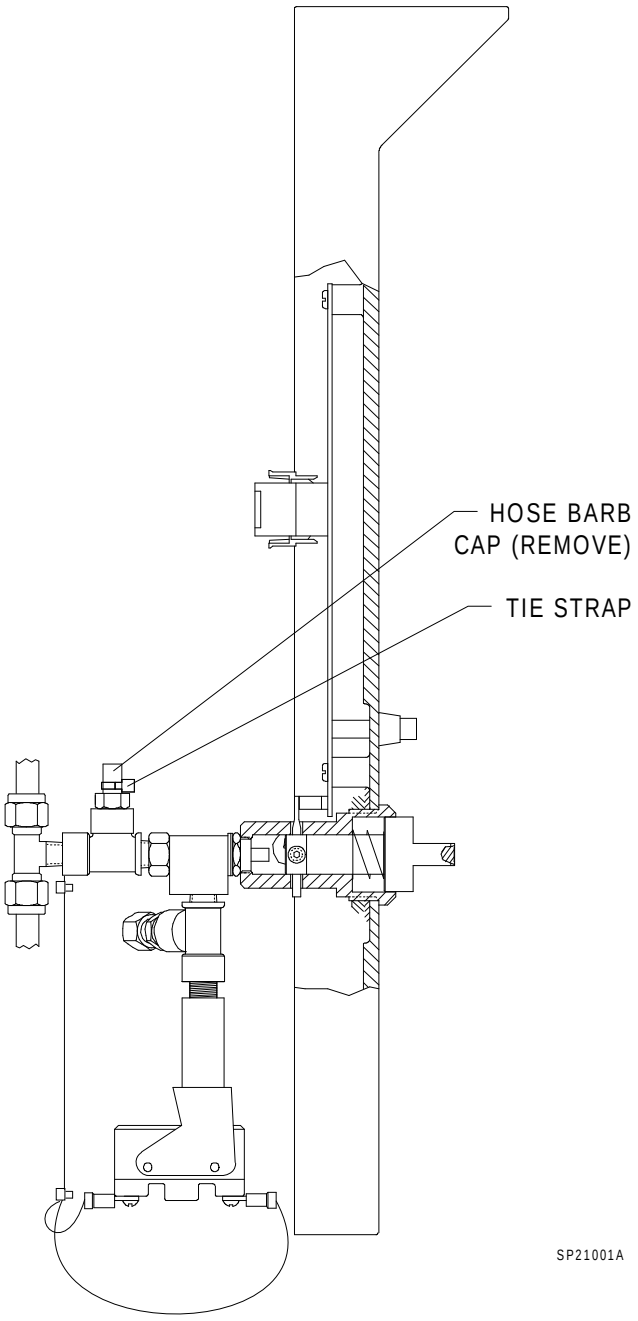


Figure 1A: SIDE VIEW OF LATER STYLE ALARM CHANNEL ASSEMBLY

INSTALLATION PROCEDURE (continued)

NOTE: DO NOT attempt to un-thread the ell fitting from the Clippard valve.

7. Open the O_2 cylinder valve momentarily to clear any debris from the back of the Clippard valve.

8. Using teflon tape on the threads, install a ⅛ NPT x 1/16 hose barb fitting (P/N 4111446) in the valve assembly where the plug was removed (or in the tee fitting that was installed in Step 6).

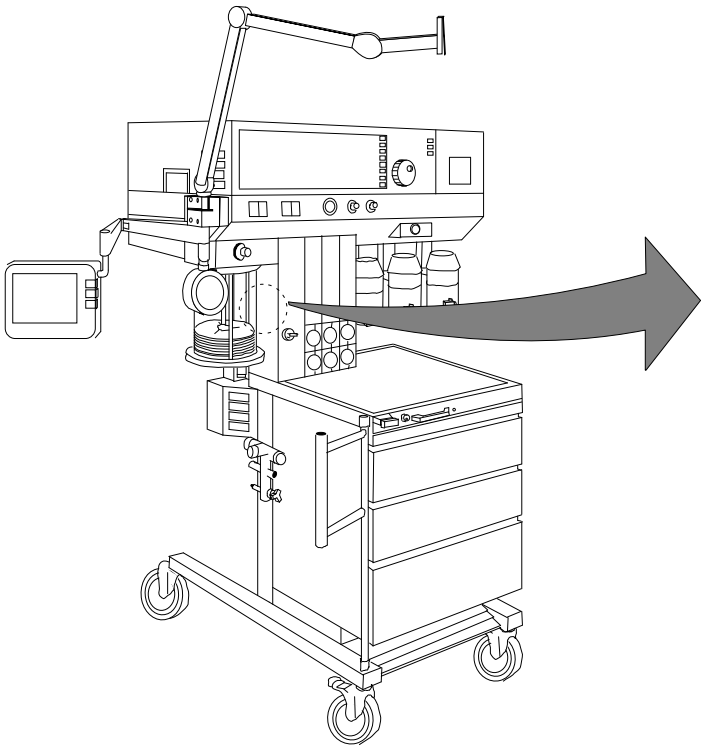
NOTE: This hose barb contains a specific restriction and shall not be substituted.

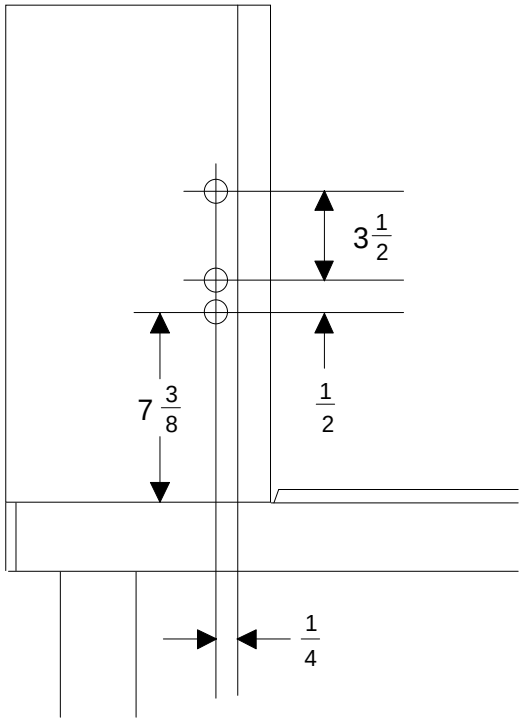
9. If mounting holes for the auxiliary flowmeter are pre-drilled in the left side of the flowmeter housing (see Figure 2), remove the hole plugs and proceed to Step 17.

   If the mounting holes for the auxiliary flowmeter are not pre-drilled, proceed to Step 10.

10. Adjust the TIDAL VOLUME knob to raise the volume indicator to its maximum setting.

11. Disconnect any hoses that are attached to the bellows assembly. Loosen the wing nuts and remove the bellows assembly.





FLOWMETER HOUSING
LEFT SIDE VIEW

Figure 2: HOLE LOCATIONS FOR AUXILIARY O_2 FLOWMETER

INSTALLATION PROCEDURE (continued)

12. Remove the bellows guide by unscrewing its stem from the bellows adjustment rod.

13. Carefully remove the bellows canister by pulling it down from the bellows top plate.

14. Unscrew the bellows assembly support rods from the bellows top plate.

15. Mark the hole locations on the left side of the flowmeter housing as shown in Figure 2. If a drilling template is available, position it to coincide with the dimensions shown.

16. Carefully drill a ¼ in. diameter hole at the upper and lower locations marked, and a ⅜ in. diameter hole at the center location.

    Carefully de-burr the holes and vacuum all drill chips from the machine.

17. The auxiliary flowmeter assembly includes all the parts that are needed for installation. If the 7 in. long piece of flex tubing is not already joined to the auxiliary flowmeter, connect the tubing to the hose barb directly behind the flow control valve and secure it with the press-on hose clamp.

18. Position the auxiliary flowmeter on the side of the flowmeter housing (feed the flex tubing through the clearance hole), and secure it with two 10-32 kep hex nuts as shown in Figure 3.

19. Connect the other end of the flex tubing to the hose barb fitting behind the Clippard valve (see Figure 3), and secure it with a tie strap.

20. Replace the bellows assembly support rods, and replace the bellows canister in the bellows top plate.

21. Replace the bellows guide in the bellows adjustment rod.

22. Replace the bellows assembly and tighten the wing nuts, and restore the hose connections.

23. Reconnect the pipeline hoses and AC power cord.

24. Perform a high pressure leak test.

25. Reinstall the flowmeter housing back cover.

26. Perform a ventilator test.

27. Proceed to the Auxiliary Oxygen Flowmeter Test.

INSTALLATION PROCEDURE (continued)

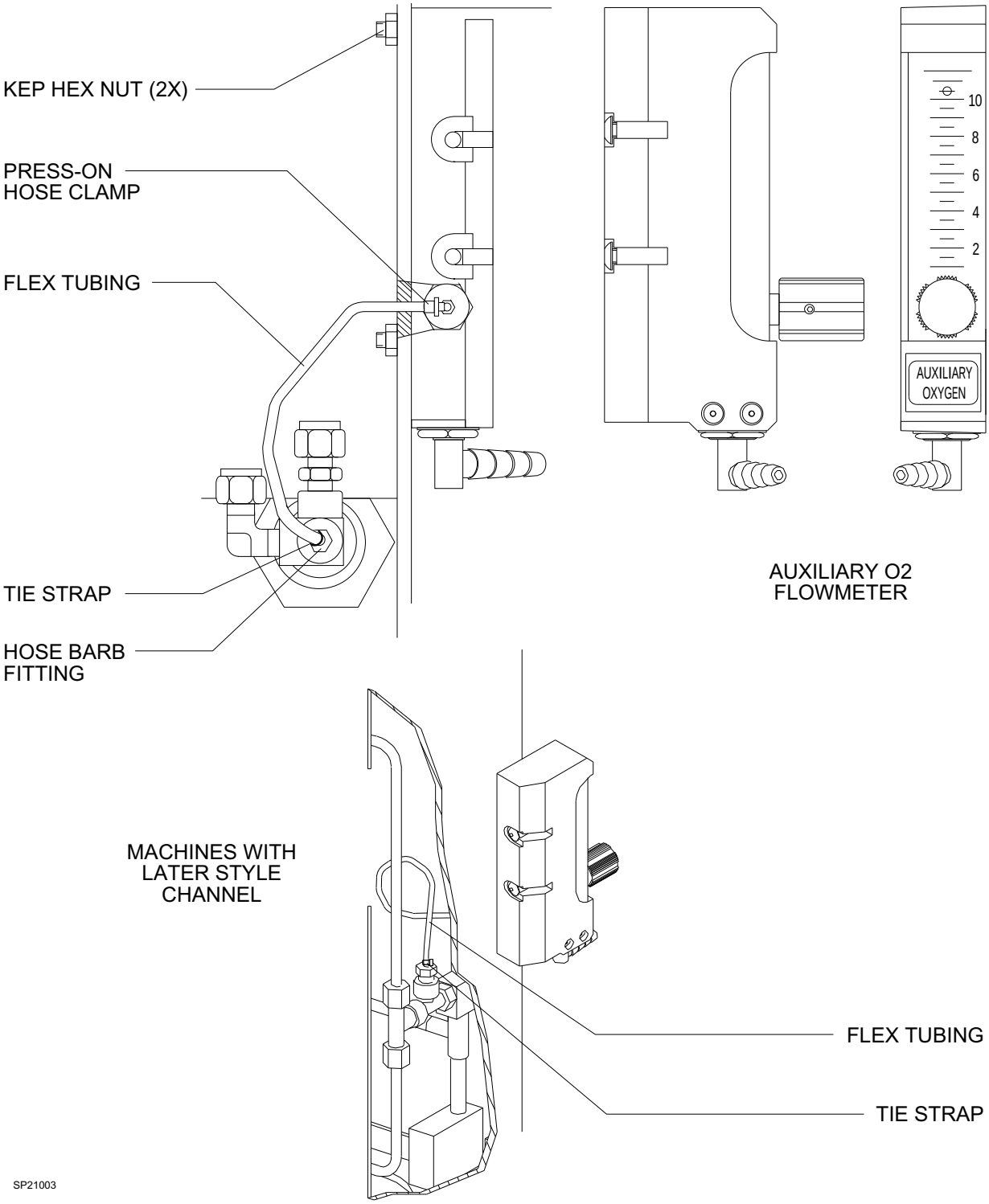


Figure 3: AUXILIARY O_2 FLOWMETER MOUNTING AND CONNECTIONS

AUXILIARY OXYGEN FLOWMETER TEST

28. Connect a test cm H_2O gauge to the auxiliary flowmeter outlet.

29. Bleed any residual pressure from the system.

30. There shall be no increase on the test pressure gauge.

31. Pressurize the system to 50 cm H_2O.

32. After 30 seconds the pressure shall not be less than 30 cm H_2O.

33. Remove the test gauge.

34. Open the auxiliary flowmeter flow control valve and ensure that flow adjustment is possible over the full range of the flowmeter.

35. Adjust the flow rate to 5 L/min.

36. Hold the sensor from a calibrated O_2 MED at the auxiliary flowmeter outlet.

37. The oxygen concentration shall be between 97% and 100%.

38. Remove the O_2 MED sensor and close the auxiliary flowmeter flow control valve.

39. Perform a complete PMS procedure on the machine.

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